

KIANA Health Clinic



Alaska Rural Primary Care Facility Code and Condition Survey Report

July 23, 2001



I. EXECUTIVE SUMMARY

Overview

The Kiana Clinic is one of the larger clinics visited. Built in 1984, it is well maintained and structurally sound. It is the only two story clinic building investigated in the Kotzebue region. The upper level consists of a small apartment with two sleeping rooms, a kitchen/dining area, and a storage room that can be used by traveling health care workers. These rooms have a separate access with a private exit door. A large room near the back of the clinic provides space for a dental chair and for use by specialty clinics. Office space and medical supply/lab space is limited in this clinic.

Renovation and Addition

Only 1560 s.f. of the existing 2300 s.f. building are considered part of the clinic as the upstairs apartment is detachable and not fully under the control of the clinic. This clinic would require an addition of 440 s.f. to meet the 2000 s.f. minimum area recommended for a medium clinic by the Alaska Rural Primary Care Facility study. An addition would require only modest remodeling if appropriately located. The cost of required renovations and code upgrades, combined with the cost of a new addition equal 77% of the cost of a new clinic.

New Clinic

Because the cost of renovation and addition is more than 75% of the cost of new construction, a new clinic of at least 2000 s.f. should be built to replace the existing clinic. A site has been selected for a new clinic which is just up the road from the current location , and nearer to the center of the community activities including the post office. A building pad has been prepared for the structure.

II. GENERAL INFORMATION

A. The Purpose of the Report

ANTHC has entered into a cooperative agreement with the Denali Commission to provide management of the small clinic program under the Alaska Rural Primary Care Facility (ARPCF) assessment, planning, design, and construction. The purpose of the Code and Condition Survey Report is to validate the data provided by the community in the Alaska Rural Primary Care Facility Needs Assessment and to provide each community with a uniform standard of evaluation for comparison with other communities to determine the relative need among the communities of Alaska for funding assistance for the construction of new or remodeled clinic facilities. The information gathered will be tabulated and analyzed according to a set of fixed criteria that will yield a priority list for funding. Additionally, the relative costs of new construction vs. remodel/addition will be evaluated to determine the most practical and cost effective means to bring the clinics up to a uniform standard of program and construction quality. The information provided in this report is one component of the scoring for the small clinic RFP that the Denali Commission sent to communities in priority Groups 1 and 2.

B. The Assessment Team

The survey was conducted on May 21, 2001. John Crittenden, AIA, Architects Alaska and Bill Henriksen, PE, RSA Engineering completed the field inspection for this project. Mark Anderson of ANTHC and Jim Howell of Maniilaq Association were the team escorts. Mark reviewed alternative site locations with village leaders. Jim is an Environmental Health Specialist for the region and this trip accounted for one of his scheduled community visits. Both Mark and Jim knew the village contacts personally and made introductions and conducted the village briefings. Team members who assisted in the preparation of the report included Stephen Schwicht and Ian VanBlankenstein of NANA/DOWL, project managers for the survey team, and Jay Lavoie of Estimations, Inc.

C. The Site Investigation

The format adopted is similar to the “Deep Look”, a facility investigation and condition report used by both ANTHC and the Public Health Service, in maintaining an ongoing database of facilities throughout the country. Facilities are evaluated with respect to the requirements of the governing building codes and design guidelines. Building code compliance, general facility condition, and program needs have been evaluated. This written report includes a floor plan of the clinic and a site plan indicating the existing clinic site. Additional information gathered during the site investigation that is referred to in the report, which includes sketches of building construction details, a building condition checklist, and proposed plans for village utility upgrades, are not included with this report. This information is available for viewing at ANTHC’s Anchorage offices and will be held for reference.

III. CLINIC INSPECTION SUMMARY

A. Community Information

The community of Kiana has a current population of 388 as published in the 2000 U.S. Census. It is located 57 miles east of Kotzebue in the Kotzebue Recording District. It is a part of the NANA Regional Corporation. Refer to the attached Alaska Community Database prepared by the Alaska Department of Community and Economic Development in Appendix C for more community information.

B. General Clinic Information

The Kiana Clinic Building was constructed in 1984 and is different from many other clinics in that it is a two story building that incorporates a two bedroom lodging facility on the upper level. The building is newer than other clinics in the region, it is well maintained and structurally sound. It sits up on pilings with a braced post foundation. It is located near the airport, but distant from the town center. The clinic has an area of 1560 s.f. which makes it 440 s.f. less than the ARPCF minimum of 2000 s.f. for a medium sized clinic.

C. Program Deficiency Narrative

The clinic employs three health care workers and a janitor. The plan incorporates two relatively large exam rooms and a larger dental exam room which can serve as a trauma room when more space is needed. There is an ample waiting room into which a reception desk has been moved. Office and storage space is at a premium in this clinic. One of the restrooms is being used for EMS storage and other medical supplies. Each of the exam rooms holds a portion of the medical supplies and lab processes. The space provided seems adequate for demonstrated needs. The building space could be remodeled to accommodate most of the Alaska Rural Primary Care Facility functions, utilizing a portion of the upper floor for clinic storage. The upstairs sleep rooms do not work well for patient holding and an alternative is needed on the first floor.

The following table illustrates a comparison between the current actual square footage (SF) and the ARPCF recommended SF. Minimum Program Goal: Medium Clinic – 2000 s.f.

Table 1 – ARPCF Clinic Area Comparison

Purpose/Activity	#	Actual Net SF	#	ARPCF Medium	Difference
Arctic Entry	1	24	2 @ 50=100	76	
Wait/Recep/Closet	1	230	150	-80	
Trauma/Telemed/Exam	1	225	200	-25	
Office/Exam	2	260	150	-110	
Admin./Records	1	120	110	-10	
Pharmacy/Lab	-		80	80	
Portable X-ray	-		-	-	
Spec. Clinic/Health	-		150	150	
Ed./Conf.					
Patient Holding/Sleep	-		80	80	
Storage	61		100	39	
HC toilet	2	120	2 @ 60=120	-	
Janitorial Closet	-		30	30	
Total Net Area	-		1270	345	
Mechanical Room	110		147	37	
Morgue	-		30	30	

The actual gross area of the Kiana building is about 2300 s.f., however, 740 s.f. of this is an upstairs apartment which cannot be considered as part of the actual clinic, leaving 1560 s.f.. Consequently, Kiana requires a gross building area expansion of approximately 440 s.f. in order to meet the 2000 s.f. minimum ARPCF requirement for a Medium Clinic.

An analysis of the existing building's program functions follows. Please also refer to the floor plan in Section H:

- **Arctic Entries:** The building is about 6 feet off the ground. The ramp leading to the main entry does not extend to grade. The entry at the main door is only about 42" deep, not nearly deep enough for stretcher access. All stairs to the building are long and steep.
- **Waiting:** A very pleasant waiting area is provided with a desk for the receptionist who controls visitors to the clinic hallway.
- **Trauma/Telemed/Exam:** None provided. Dental area may be used in emergencies.

- **Office/Exam:** The two exam rooms are all reasonably large, but none equipped to handle trauma patients as they contain office work areas, filing and storage. This cuts down on their availability for seeing patients.
- **Administration/Records:** The administrative activities are spread out through the various rooms in this building sharing space with the medical supplies, the lab, the exam rooms and the waiting area. It does not provide a good working arrangement for the staff.
- **Pharmacy/Lab:** One office contains medical supplies and some lab equipment. Some of these items are also located in one of the exam rooms.
- **Specialty Clinics:** Specialty clinics can make use of the large dental room in the back of the clinic.
- **Patient Holding/Sleep:** Two rooms upstairs can be used by itinerants. A cot is available on the main level.
- **Storage:** In addition to the exam room and office storage, one of the toilet rooms has been taken over for medivac storage.
- **HC Toilet Room:** The toilet rooms are adequately sized. Neither room has bathing facilities which are now located upstairs in the apartment and not generally available to the clinic for patients.
- **Janitor Closet:** This is located in the mechanical room.
- **Ancillary Spaces:** The dental area is a kind of ancillary space as it has little function when the dentist is not in town.

D. Architectural/Structural Condition

The building is constructed to better standards than most clinics visited. It uses 2x8 exterior walls, an increase of R-12 over the standard 2x6 wall. The second floor makes a compact form which cuts down on heat loss through the ceiling of the clinic. The floor has insufficient insulation, but no complaints were heard, and the floor does not appear to be suffering from freeze related cracking. The foundation system is post and pad with a good system of cross bracing which appears to be maintaining a rigid level floor. The exterior stairs and ramps, however, are seriously in need of replacing. The handrails do not have ADA profile rails, one ramp stops halfway to grade and consequently only serves a purpose in the deep of winter. In general, this is a good quality building.

E. Site Considerations

A site has been selected for a new clinic which is fairly close to the current location, and nearer to the center of the community activities including the post office. A building pad has already been prepared for the structure. The community has plans to convert the existing building into boarding/hotel type quarters for the community and visitors. According to clinic personnel, the community anticipates getting a larger clinic than the prototype clinic of 2000 s.f. Whether this clinic has been funded was not determined.

Site utilities include village water, sewer, power, and telephone service directly to the building. The sewer system had been frozen most of the winter but had been thawed prior to our inspection. The freeze-up of the sewer system was reported as an annual event.

F. Mechanical Condition

Heating and Fuel Oil: A Burnham Model V-1 7A-T boiler provides heating for the building. There are three zones on baseboard heating and a zone serving the hot water generator. In the event that the boiler fails, a wood fueled stove is provided at the reception/waiting area. The boiler is in fair condition, but there are a number of maintenance and code issues associated with the boiler and boiler room that are addressed in the Deficiency Evaluation and Cost Assessment forms required to bring it up to a safer and more reliable system. The condition of the baseboard around the perimeter of the building is fair. It is a residential grade baseboard with some sections missing or damaged. Fuel oil is provided from a 500 gal horizontal cylindrical tank just outside of the boiler room. The tank needs to be resupported and its piping to the boiler room needs to be redone and supported properly.

Ventilation: There is no ventilation serving the building except for exhaust fans located in the three restrooms. The exhaust is ducted to the outside, but the exhaust hood serving the restrooms on the lower floor are blocked off with batt insulation. The range in the upstairs kitchen is supplied with a recirculating exhaust hood. The range hood should be ducted directly to the outside of the building. The clinic needs to be provided with a mechanical ventilation system and should not rely on operable windows alone.

Plumbing: Cold water is provided into the clinic from the village water supply and hot water is generated in the boiler room from a Amtrol-9L hot water generator that has a single wall heat exchanger. The heat exchanger is required to be double wall to minimized the chance of cross contamination in the event that the heat exchanger fails. A 4" waste line from the building flows by gravity to the village sewer system. The waste pipe for the restroom at the end of the building that also acts as the medivac equipment store room was still frozen at the time of the visit. Winter freeze-up of the sewer system is reported to be a chronic problem. There are two restrooms on the first floor. Each has a water closet and a lavatory. The water closets are both ADA compliant. The lavatories are not mounted at ADA heights. The first of the two restrooms has a washing machine installed between the lavatory and the water closet, which infringes on the ADA clearances. The second restroom was out of service due to the frozen waste, but it is also being used as a medivac equipment storage area, which also infringes on

the ADA required clearances. The restroom on the second floor includes a water closet, lavatory and shower/tub combination, none of which are ADA compliant. The fixtures in the upstairs restroom are somewhat dated, but their condition is fair. Exam room #1 and exam room #2 each have a single compartment sink with gooseneck faucets, both in fair condition. The kitchen in the second floor has a double compartment sink, dated but in fair condition. The facility is not equipped with a mop or janitor sink.

G. Electrical Condition

Power: 120/240-volt single-phase power is provided to the clinic's electrical meter from an underground service. The breaker size at the meter is 200-amps and serves the 200-amp building panel. Conductors to the panel are all copper. The system appears to be grounded properly with a wire extending from the meter base down along the side of the building to a grounding rod. The electrical panel has room for 30 breakers, 28 breakers were installed and there was one spare. Wiring from the panel has been done in Romex. The numbers of receptacles inside the building are appropriate, no plug strips were observed. GFCI breakers were located in the panel, but it could not be confirmed whether they protected the receptacles near the restrooms, kitchen, or exam room sinks. There are no weatherproof receptacles located on the outside of the building. A number of electrical deficiencies and code issues are identified in the Deficiency Evaluation and Cost Assessment forms.

Lighting and Emergency Fixtures: Most lighting in the lower floor (clinic) are surface mounted florescent fixtures, two-bulb fixtures in the hallway and four bulb fixtures in the waiting area, office area, and exam or workrooms all using 35-watt 40F lamps. The boiler room and restrooms used incandescent fixtures. All upstairs lighting was done with incandescent fixtures. The fixtures on the first floor are all in fair condition and the lighting levels appeared good. Lighting on the second floor was acceptable and the fixtures were in fair condition, but a little dated. Exterior lighting was provided with incandescent fixtures at the entrances and over the fuel tank on the side of the building. The fixtures were in poor condition with most of the covers missing. All exterior fixtures should be replaced. There were no emergency light fixtures in the building. A single exit sign was located over the front entry door. It was a self-adhesive type sign and should be replaced with a exit fixture. Battery type smoke detectors were provide in two areas, the living room in the upstairs quarters and in the back dental exam area on the lower floor. Coverage was minimal.

Telecommunications: Four phone lines were included in the clinic. One phone line and a fax line in the clinic area, a direct phone line for Kotzebue Hospital, and a phone line were provided for the upstairs living quarters. A Telemed system was also recently installed.

H. Existing Facility Floor Plan

See following sheet for the floor plan of the existing clinic.

J. Community Plan

Refer to the attached community plan for location of the existing clinic and the proposed location for the new clinic. If the existing clinic site is the preferred location or if a new site has not yet been selected, only the existing clinic location will be shown.

IV. DEFICIENCY EVALUATION AND COST ASSESSMENT

The attached deficiency reporting forms are based on Public Health Service form AK H SA-43. The forms are numbered sequentially for each discipline starting with **A01** for Architectural and structural deficiencies, **M01** for Mechanical deficiencies and **E01** for Electrical deficiencies.

A. Deficiency Codes

Deficiencies are further categorized according to the following PHS Deficiency codes to allow the work to be prioritized for federal funding, should that apply. Deficiency codes used in this survey include:

- 02 Fire and Life Safety:** These deficiencies identify areas where the facility is not constructed or maintained in compliance with provisions of the state mandated building codes including the International Building Code, The Uniform Fire Code, NFPA 101, The Uniform Mechanical and Plumbing Codes and The National Electrical Code.
- 03 Safety:** These deficiencies identify miscellaneous safety issues.
- 04 Environmental Quality:** This addresses DEC regulations, hazardous materials and general sanitation.
- 05 Program Deficiencies:** These are deficiencies which show up as variations from space guidelines established in the Alaska Primary Care Facility Facility Needs Assessment Project and as further evaluated through observation at the facility site and documented in the facility floor plans.
- 07 Disability Access Deficiencies:** The items with this category listing are not in compliance with the Americans with Disabilities Act.
- 08 Energy Management:** These deficiencies address the efficiency of heating systems/fuel types and the thermal enclosures of buildings.
- 11 Structural Deficiencies:** These are deficiencies with the fabric of the building. It may include the foundations, the roof or wall structure, the materials used, the insulation and vapor retarders, the attic or crawl space ventilation and the general condition of interior finishes. Foundation systems are included in this category.
- 12 Mechanical Deficiencies:** These are deficiencies in the plumbing, heating, ventilating, air conditioning, or medical air systems.
- 13 Electrical Deficiencies:** These are deficiencies with electrical generating and distribution systems, fire alarm systems and communications systems.
- 14 Utilities:** This category is used for site utilities, as opposed to those within the building and may include sewer lines and water and power distribution.

B. Photographs

Each sheet has space for a photograph. Some deficiencies do not have photos. Photographs do not cover all areas where the deficiencies occur but are intended to provide a visual reference to persons viewing the report who are not familiar with the facility. Additional photographs of the clinic and the surrounding area are included in Appendix B.

C. Cost Estimate General Provisions

New Clinic Construction

- **Base Cost**

The Base Cost provided in Section VI of this report is the direct cost of construction, inclusive of general requirements (described below) and contingency for design unknowns (an estimating contingency). The base cost is exclusive of overhead and profit, mark-ups, area cost factors and contingencies. Material costs for the project are all calculated FOB Anchorage and labor rates are based on Davis Bacon wages, regionally adjusted to Anchorage. Transportation costs, freight, Per Diem and similar costs are included in the base costs. The Project Factors and Area Cost Factor are multipliers of the base costs.

General Requirements are based on Anchorage costs without area adjustment. It is included in the Base Cost for New Clinics. These costs are indirect construction cost not specifically identifiable to individual line items. It consists of supervision, materials control, submittals and coordination, etc. The general requirements factor has not been adjusted for Indian Preference.

The Design Unknowns Contingency is an estimator's contingency based on the schematic nature of the information provided, the lack of any real design, and the assumption that any project will encompass related work not specifically mentioned.

- **Project Cost Factors**

Equipment Costs for new medical equipment has been added at 17% of the cost of new floor space.

Design Services is included at 10% to cover professional services including engineering and design.

Construction Contingency is included at 10% of the Base Costs to cover changes encountered during construction.

Construction Administration has been included at 8% of the Base Costs. This is for monitoring and administration of the construction contract.

- **Area Cost Factor**

The Area Cost Factor used in the cost estimates for this facility is shown in Section VI of this report. The area cost factors are taken from a recent study completed for the Denali Commission for statewide healthcare facilities. The numbers are the result of a matrix of cost variables including such items as air travel, local hire costs, room and board, freight, fire protection equipment, foundation requirements, and heating equipment as well as contractor costs such as mobilization, demobilization, overhead, profit, bonds and insurance. These parameters were reconsidered for each village, following the site visit, and were modified, if necessary.

- **Estimated Total Project Cost of New Building**

This is the total estimated cost of the project, including design services. The construction contract will be work subject to Davis Bacon wages, and assumes construction before year-end 2001. No inflation factor has been applied to this data.

Remodel, Renovations, and Additions

- **Base Cost**

The Base Cost provided in the specific deficiency sheets is the direct cost of construction, exclusive of overhead and profit, mark-ups, area cost factors and contingencies. Material costs for the project are all calculated FOB Anchorage and labor rates are based on Davis Bacon wages, regionally adjusted to Anchorage. Most of the deficiency items do not constitute projects of sufficient size to obtain efficiency of scale. The estimate assumes that the projects are completed either individually, or combined with other similar projects of like scope. The numbers include moderate allowances for difficulties encountered in working in occupied spaces and are based on remodeling rather than on new construction costs. Transportation costs, freight, Per Diem and similar costs are included in the base costs. The General Requirements, Design Contingency and Area Cost Factors are multipliers of the base costs.

The cost of Additions to clinics is estimated at a unit cost higher than New clinics due to the complexities of tying into the existing structures.

Medical equipment is calculated at 17% of Base Cost for additions of new space only and is included as a line item in the estimate of base costs.

- **General Requirements Factor**

General Requirements Factor is based on Anchorage costs without area adjustment. The factor is 1.20. It is multiplied by the Base Cost to get the project cost, exclusive of planning, architecture, engineering and administrative costs. This factor assumes projects include multiple deficiencies, which are then consolidated into single projects for economies of scale. The general requirements factor has not been adjusted for Indian Preference.

- **Area Cost Factor**

The Area Cost Factor used in the cost estimates for this facility is shown in Section VI of this report. The area cost factors are taken from a recent study completed for the Denali Commission for statewide healthcare facilities. The numbers are the result of a matrix of cost variables including such items as air travel, local hire costs, room and board, freight, fire protection equipment, foundation requirements, and heating equipment as well as contractor costs such as mobilization, demobilization, overhead, profit, bonds and insurance. These parameters were reconsidered for each village, following the site visit, and were modified, if necessary.

- **Contingency for Design Unknowns (Estimating Contingency)**

The Design Unknowns Contingency is an estimator's contingency based on the schematic nature of the information provided, the lack of any real design, and the assumption that any project will encompass related work not specifically mentioned. The factor used is 1.15.

- **Estimated Total Cost**

This is the total estimated bid cost for work completed under Davis Bacon wage contracts, assuming construction before year-end 2001. This is the number that is entered in the front of the deficiency form. No inflation factor has been applied to this data.

- **Project Cost Factors**

Similar to new clinics, the following project factors have been included in Section VI of this report.

Design Services is included at 10% to cover professional services including engineering and design.

Construction Contingency is included at 10% of the Base Costs to cover changes encountered during construction.

Construction Administration has been included at 8% of the Base Costs. This is for monitoring and administration of the construction contract.

- **Estimated Total Project Cost of Remodel/Addition**

This is the total estimated cost of the project including design services, the construction contract cost for work completed under Davis Bacon wages and assuming construction before year-end 2001. No inflation factor has been applied to this data.

V. SUMMARY OF EXISTING CLINIC DEFICIENCIES

The attached table summarizes the deficiencies at the clinic and provides a cost estimate to accomplish the proposed modifications. If all deficiencies were to be addressed in a single construction project there would be cost savings that are not reflected in this tabulation. The total cost of remodel/addition shown in Section VI is intended to show an overall remodel cost that reflects this economy. Refer to Section VI for a comparison of remodel/addition costs to the cost of new construction. The specific deficiency sheets are included in Appendix A.

VI. NEW CLINIC ANALYSIS

The decision on whether to fund new clinic construction or a remodel/addition of the existing clinic is to be determined by comparing the cost of a new facility designed to meet the program requirements of the Alaska Rural Primary Care Facilities minimum area requirements with the projected combined cost of renovating, remodeling and adding onto the existing building to provide an equivalent facility. If the cost of the remodel/addition project is greater than 75% of the cost of constructing an altogether new facility then a new facility is recommended. That ratio is computed as follows:

- **The cost of a new clinic in Kiana is projected to be:**

Base Anchorage Cost per s.f.	\$183/ s.f.
Medical Equipment Costs @ 17%	\$31
Design Services 10%	\$18
Construction Contingency 10%	\$18
Construction Administration. 8%	\$15
Sub-total	\$265/ s.f.
Area Cost Factor for Kiana 1.46*	
Adjusted Cost per s.f.	\$388/ s.f.

Total Project Cost of NEW BUILDING 2,000 x \$388 = \$776,000

- **The cost of a Remodel/Renovation/Addition is projected to be:**

Projected cost of code/condition renovations (From the deficiency summary)	
90% of cost of code/condition improvement**	\$143,980 Renovation
Projected cost of remodeling work (See A04)	
1,560 s.f. clinic @ 43% remodel = 670 s.f.	\$105,297 Remodel
Projected cost of building addition (See A05)	
2,000 s.f. – 1,560 s.f. = 440 s.f.	\$219,953 Addition
<input type="text"/> Design 10%, Const. Contingency 10%, Const. Admin. 8%	\$131,384

Total Project Cost of REMODEL ADDITION \$600,614

- **Ratio of remodel:new is \$600,614 : \$776,000 = 0.77X**

The cost of a remodel/addition for this clinic would cost 77% the cost of a new clinic, therefore, a new clinic is recommended for this community.

* The Area Cost Factor was refined by Estimations, Inc. in July 2001 based on information obtained during the site visit.

** The 90% factor represents economy of scale by completing all renovation work in the same project.

Appendix A: SPECIFIC DEFICIENCIES LISTING

Refer to the attached sheets for the listing of the individual deficiencies and the corrective action recommended.

Appendix B: GENERAL SITE PHOTOGRAPHS

The following sheets provide additional photographic documentation of the existing building and surroundings.

Appendix C: ADCED Community Profile

Refer to the attached document prepared by Alaska Department of Community and Economic Development profiling the community of Kiana.

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